

Amendment and Response
Applicant: James A. Mathews
Serial No.: 10/632,167
Filed: July 30, 2003
Docket No.: 10030278-1

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OCT 26 2006

Title: INTEGRATED OPTICAL DETECTOR AND DIFFRACTIVE OPTICAL ELEMENT

REMARKS

The following remarks are made in response to the Office Action mailed July 26, 2006. Claims 1, 5, 6, 10, 11, and 19-23 were rejected. Claims 1, 5, 6, 10, 11, and 19-23 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1, 5, 6, 10, 11, and 19-23 under 35 U.S.C. 103(a) as being unpatentable over the Wagner et al. U.S. Patent No. 6,879,014 in view of the Morris, Jr. et al. U.S. Patent No. 6,452,669.

Independent claim 1 claims an integrated optical apparatus configured to detect and diffract light transmitted from a light source external to the integrated optical apparatus. The integrated optical apparatus includes a substrate and a diffractive optical element. The diffractive optical element includes a plurality of stacked layers of optically transmissive material formed on the substrate, wherein at least one of the layers of optically transmissive material is a sensing element having a resistance responsive to incident light. Neither the Wagner et al. patent nor the Morris, Jr. et al. patent alone or in combination teach or suggest all of these limitations of independent claim 1.

The Wagner et al. patent does not teach that one of the layers of optically transmissive material is a sensing element having a resistance responsive to incident light as recited in independent claim 1. Rather, the Wagner et al. patent, teaches a PIN diode (e.g., embodiments illustrated in Figures 4 and 8) that is formed by multiple layers including a P-layer 101 and a N-layer 102 surrounding an I-layer 103 with contact being made through a top conductor 104 and a bottom conductor 105 (See Column 8, lines 30-38). The PIN diode disclosed in the Wagner et al. patent forms a resistance between top conductor 104 and bottom conductor 105.

The Examiner admits that the Wagner et al. patent does not teach a diffractive optical element. The Morris, Jr. et al. patent discloses an optics block 30 having optics which may be a diffractive element. Nevertheless, the optics block 30 disclosed in the Morris, Jr. et al. patent does not include a plurality of stacked layers of optically transmissive material formed on the substrate, wherein at least one of the layers of optically transmissive material is a

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sensing element, as recited in independent claim 1. Instead, the Morris, Jr. et al. patent discloses a distinct photodetector 20, preferably a photodiode. Thus, the Morris, Jr. et al. patent does not teach or suggest the limitations of independent claim 1 of a diffractive optical element including a plurality of stacked layers of optically transmissive material formed on the substrate, wherein at least one of the layers of optically transmissive material is a sensing element having a resistance responsive to incident light.

In view of the above, the combination of the Wagner et al. patent and the Morris, Jr. et al. patent does not teach or suggest all of the limitations of independent claim 1.

Furthermore, dependent claims 5-6, 10-11, and 19-23 further define patentably distinct independent claim 1.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103 rejections to claims 1, 5, 6, 10, 11, and 19-23, and requests allowance of these claims.

CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1, 5, 6, 10, 11, and 19-23 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1, 5, 6, 10, 11, and 19-23 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-3718.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

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Any inquiry regarding this Amendment and Response should be directed to either Patrick G. Billig at Telephone No. (612) 573-2003, Facsimile No. (612) 573-2005 or John R. Pessetto at Telephone No. (303) 298-9888, Facsimile No. (303) 297-2266. In addition, all correspondence should continue to be directed to the following address:

AVAGO TECHNOLOGIES, LTD.

P.O. Box 1920

Denver, Colorado 80201-1920

Respectfully submitted,

James A. Matthews,

By his attorneys,

DICKE, BILLIG & CZAJA, PLLC

Fifth Street Towers, Suite 2250

100 South Fifth Street

Minneapolis, MN 55402

Telephone: (612) 573-2003

Facsimile: (612) 573-2005

Date: 10-26-06
PGB:cmj
Patrick G. Billig
Reg. No. 38,080

CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300 on this 26 day of October, 2006.

By 
Name: Patrick G. Billig